

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A power tool, comprising:
  - (a) a housing;
  - (b) a base plate coupled to the housing and having a base plate width; and
  - (c) a motor assembly attached to the housing and coupled to a tool connector adapted to releasably receive a tool, the motor assembly and housing having a width no greater than the base plate width, the motor assembly having a length to diameter ratio that is at least 1:1.5.
2. The power tool of Claim 1, wherein the motor assembly length and diameter is substantially one inch and 4.5 inches, respectively.
3. The power tool of Claim 1, wherein the base plate width is substantially five inches.
4. The power tool of Claim 1, wherein the motor assembly and housing are pivotably attached to the base plate for selective swinging motion of the motor assembly and housing between a predetermined range of motion.
5. The power tool of Claim 4, wherein the predetermined range of motion is substantially between  $+51^{\circ}$  from a plane extending normal to the base plate width and  $-40^{\circ}$  from the plane.
6. The power tool of Claim 4, wherein the predetermined range of motion is substantially between a plane extending normal to the base plate width and up to  $50^{\circ}$  from the plane.
7. The power tool of Claim 1, wherein the motor comprises a printed circuit board disposed between first and second coil assemblies.
8. The power tool of Claim 7, wherein each coil assembly having a plurality of coils, where adjacent coils are nested within each other.
9. The power tool of Claim 8, wherein the printed circuit board includes a plurality of coil connections in communication with the plurality of coils.

10. The power tool of Claim 1, further comprising an adjustable exhaust assembly integrally formed with the housing.

11. The power tool of Claim 10, wherein the adjustable exhaust assembly is rotatably disposed within the housing and positionable between at least two exhaust positions.

12. The power tool of Claim 11, wherein the adjustable exhaust assembly is rotatably disposed within the housing and positionable between a left exhaust position, a right exhaust position and a center exhaust position.

13. The power tool of Claim 1, further comprising a first base plate extension removably fastened to the base plate.

14. The power tool of Claim 13, further comprising a second base plate extension removably fastened to the base plate.

15. The power tool of Claim 14, wherein at least one of the first and second extensions includes a flange extending from the first or second extension to permit the shoe extension to be used as a rip guide.

16. A power circular saw, comprising:  
(a) a housing;  
(b) a base plate having a width and fastened to the housing; and  
(c) a motor assembly attached to the housing and coupled to a tool connector adapted to releasably receive a saw blade, the motor assembly and housing having a width no greater than the base plate width, the motor assembly having a length to diameter ratio that is at least 1:1.5.

17. The power circular saw of Claim 16, wherein the motor assembly length and diameter is substantially one inch and 4.5 inches, respectively.

18. The power circular saw of Claim 16, wherein the base plate width is substantially five inches.

19. The power circular saw of Claim 16, wherein the motor assembly and housing are pivotably attached to the base plate for selective swinging motion of the motor assembly and housing between a predetermined range of motion.

20. The power circular saw of Claim 16, wherein the motor comprises a printed circuit board disposed between first and second coil assemblies.

21. The power circular saw of Claim 20, wherein each coil assembly having a plurality of coils, where adjacent coils are nested within each other.

22. The power circular saw of Claim 16, further comprising an adjustable exhaust assembly integrally formed with the housing.

23. The power circular saw of Claim 16, further comprising a first base plate extension removably fastened to the base plate.

24. A power circular saw, comprising:

- (a) a housing;
- (b) a base plate having a width and fastened to the housing; and
- (c) a motor assembly attached to the housing and coupled to a tool connector adapted to releasably receive a saw blade having a diameter, the motor assembly and housing having a width no greater than the base plate width, the motor assembly having a length to diameter ratio that is at least 1:1.5, the motor comprising an output shaft having a length, wherein the motor is attached to the housing such that an axis extending through the length of output shaft is within the diameter of the saw blade.

25. A power circular saw, comprising:

- (a) a housing;
- (b) a base plate having a width of five inches and fastened to the housing; and
- (c) a motor assembly attached to the housing and coupled to a tool connector adapted to releasably receive a saw blade, the motor assembly and housing having a width no greater than the base plate width, the motor assembly having a length to diameter ratio that is at least 1:1.5.

26. A power circular saw, comprising:

- (a) a housing;
- (b) a base plate having a width and fastened to the housing; and

(c) a motor assembly attached to the housing and coupled to a tool connector adapted to releasably receive a saw blade, the motor assembly and housing having a width no greater than the base plate width, the motor assembly comprising:

- (i) first and second rotor assemblies; and
- (ii) a stator assembly disposed between the first and second rotor assemblies, the stator assembly having a printed circuit board disposed between a plurality of nested coil windings, the motor assembly having a length to diameter ratio that is at least 1:1.5.